

ASI-PDH-E\$ MediaCombiner

*** 1900 Series ***

Media to Network Combiner



Product Description

New to the KLEINBIT range is the 1900 Combiner, which has been designed to enable optimal use of available G.703 bandwidths. This flexible compact unit takes a combination of up to 8 MPEG, PDH or data inputs and multiplexes them onto a single G.703 transport stream.

Product Specification

- Compact 1RU system housing
- Dual power supplies for system resilience (autoranging 100-240V AC, 50-60Hz)
- Modular design, to grow with your requirements
- Up to eight data inputs
- Dual Telecom outputs on TX units to allow alternate/ redundant routing
- Data modules available: ASI and LVDS (E1/T1 in development)
- Telecom modules available: E3/T3, DS3 & E4 (STM-1 in development)
- SNMP & Web Browser Remote monitoring (4th Quarter 2002)
- Programmable Reed-Solomon forward error correction (4 and 16 byte)
- Interleaving / de-Interleaving for signal resilience Fully flexible bandwidth usage
- Local management and system set-up (via front panel interface)

KLEINBIT 1900 Series Telecom Module Options

The table below lists the range of output line modules available for the 1900 series Combiner. Further line interfaces are regularly added to the range according to individual client requirements.

Line Module	Line Rate	Line Coding	Max. Data Rate 192 Frame (4 byte RS)	Max. Data Rate 204 Frame (16 byte RS)
E3	34.368 Mb/s	HDB-3	31.962 Mb/s	30.24 Mb/s
DS3 Framed	44.736 Mb/s	B3ZS	41.115 Mb/s	38.904 Mb/s
DS3 Unframed	44.736 Mb/s	B3ZS	41.604 Mb/s	39.368 Mb/s
E4	139.264 Mb/s	CMI	129.608 Mb/s	122.64 Mb/s
STM-1	Launching Q3 2002			

Application Note

Like any two industries that have developed separately, telecommunications and broadcast have their own sets of standards and requirements that do not always coincide. This is apparent in the mismatch between the available standard telecom bandwidths, and the bandwidths that the broadcast industry regularly requires to transport over G.703 networks.

Often the only solution to this is to partially fill the bandwidth that is contracted, which can prove expensive. The KLEINBIT 1900 Series improves bandwidth usage by allowing combining up to eight input signals, either MPEG, G.703 or data onto the same single G.703 transport stream, hence using the whole of the available bandwidth, which has been contracted.

Bandwidth Usage Optimization

In the application shown below 5 sources, 2 x LVDS, 2 x ASI and a data source are combined onto a single G.703 transport stream. This G.703 Transport stream is then presented as dual outputs, which may be used for alternate routing across the telecom network.

At the receive end, it is shown that the two G.703 streams may here be fed into a 2400 Series protection switch, which selects the better of these to output and inputs this to the 1900 Series receiver. Status monitoring and control of both the transmitter and receiver is achieved via a TCP/IP link.

